

## ISIS - Question #4028

### Radiometric calibration for Galileo images: glssical

2016-06-16 04:50 PM - Ashley Carlton

<b>Status:</b>	In Progress	
<b>Priority:</b>	Normal	
<b>Assignee:</b>	Moses Milazzo	
<b>Category:</b>	Applications	
<b>Software Version:</b>		
<b>Description</b>		
Hello,		
<p>I am interested in applying the radiometric calibration to Galileo images. From my understanding, the calibration removes the dark current. However, I don't want the units of reflectance (I/F) or radiance. I am interested in getting the energy deposited per pixel. It is easy enough to find this using the DN and the gain, but I'm not sure how to get this from the radiance.</p>		
<p>Many thanks in advance for your assistance!</p>		

#### History

##### #1 - 2016-06-17 10:33 AM - Tammy Becker

- Status changed from New to Acknowledged

##### #2 - 2016-06-20 09:01 AM - Moses Milazzo

Hello Ashley,

The glssi calibration program does indeed remove the dark current and it also applies the rest of the radiometric calibration. Radiance units ( $\text{Watts/m}^2/\text{sr}$ ) are the value you want the calibration to output if you are looking for energy. You'll then need to multiply the output values of glssical by 10,000 (because glssical calculates milliwatts); by the exposure time—with or without a small shutter offset correction—(this should be in the cube labels); by the area of the pixel at the surface (this will be the resolution—m/px—in the label); and by  $2\text{Pi}$  (to account for the angle of emittance from the surface).

This will give you Joules/pixel.

##### #3 - 2016-06-20 10:06 AM - Tammy Becker

- Status changed from Acknowledged to In Progress

- Assignee set to Moses Milazzo